DOCUMENT RESUME

ED 127 108 RC 009 413

AUTHOR Self, George D.
TITLE A Policy Relevant Theory of Entrepreneurship.
PUB DATE 26 Aug 76
NOTE 29p.; Paper presented at the Annual Meeting of the Rural Sociological Society (New York, New York, August 26-29, 1976)

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS *Business; *Community Development; *Community Leaders; Information Dissemination; *Models; Policy Formation; *Rural Areas; Self Actualization; *Social Environment; Theories
IDENTIFIERS *Entrepreneurship; New Brunswick (Kent County)

ABSTRACT

Combining the approaches of McClelland-Hagan and Schumpeter, the interactive effects of entrepreneurial potential and social climate on growth were examined. Entrepreneurial potential was designated as degree of internality as measured by Rotter's I-E aggregate index of 23 items. Social climate was designated degree of community information flow as measured by eight "fluidity" factors, and growth was measured by the Guttman differentiation scales of industrial and commercial complexity and community income multipliers. Data derived from 12 rural communities in Kent County, New Brunswick with various levels of development in 1972 were examined via 3 statistical techniques (Fisher's exact probability, Kruskal-Wallis' one way analysis, and Spearman's rho). Results indicated a high positive relationship (.74) between the I-E fluidity structure and growth; wherein, the I-E fluidity social structure explained 54% of the variance in a community's growth. It was concluded that the model's intrinsic value was in its adaptability for social planners, since both fluidity and Rotter's locus of control could be policy manipulated for programs in community development (fluidity could be increased by planning programs that facilitated information exchange and entrepreneurial attitudes could be improved by increasing an individual's confidence in controlling/understanding his environment). (JC)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED127108

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

A POLICY RELEVANT THEORY OF ENTREPRENEURSHIP

by

George D. Self

Lamar University

Department of Sociology

Beaumont, TX. 77710

RC009413

Paper presented at the Annual Meeting of the Rural Sociological Society, 26-29 August 1976, New York, New York.

' A POLICY RELEVANT THEORY OF ENTREPRENEURSHIP '

Vocal outburst from third world new nations and rediscovering of poverty in the sixties led to an onslaught of theories in planned community and regional development. These theories are based on two fundamental concepts of community evolutionary processes; economic growth and development. Economic growth refers to increases in per capita income and differentiation[1], while development is perceived as increases in quality of life levels of community and regional inhabitants. In rural sectors as compared to highly differentiated-urban sectors growth is usually an important determinant of development. Without increases in differentiation, rural residents have few alternative life styles from which to choose.

Major phenomena attributed to economic growth are capital accumulation and entrepreneurship. Attention in social sciences has been placed on entrepreneurship but as yet is not effectively operationalized for regional planning. Intent of this paper is to develop still another theory of entrepreneurship, different from others in its adaptive abilities for social planners. An essential pre-

[1]differentiation includes industrial, commercial, organizational and occupational.

requisite of policy relevant models is inclusion of variables capable of being directly or indirectly manipulated through policy decisions.

The role of entrepreneurs in economies was first identified by Richard Cantillon, an early 18th century economist. The primary role of entrepreneurs was innovation through the process of combining factors of production to produce goods and services to be sold in the market. Since prices of these goods and services are not predetermined, the entrepreneurial function requires uninsured financial risk.

This important role in development was ignored by later economists until Joseph Schumpeter (1934) re-emphasised the leading role of entrepreneurship in development. Schumpeter's work developed the economic entrepreneurial process but did not attempt to create a theory of entrepreneurship. Schumpeter assumed that sufficient potential entrepreneurs existed in all socio-economic systems. Requirements for this important role to be utilized in economies is dependent on a favorable social climate. A favorable social climate defined by Schumpeter is a system with available information about

the market and in addition a positive attitude toward social change. Entrepreneurs will only be efficient if there is an adequate knowledge of the market and if society will accept the social deviance of entrepreneurs without a great deal of antagonism.

McClelland (1961) and Hagan (1962) have produced the most widely read theories of entrepreneurship. Both theorists disagree with Schumpeter concerning availability of entrepreneurs and proceed to develop theories to explain supply of entrepreneurs. To explain this supply McClelland places emphasis on personality characteristics of entrepreneurs, while the latter attempts to demonstrate how these characteristics become a dominant motivational force in individuals. Characteristics that dominate both theories are high achievement motivation and need for this achievement.

A more general analysis than the ones by these authors is represented in the works of Rotter (1954, 1966). Rotter believes the primary personal attributes of an individual's achievement motivation is his locus of control. The internal-external (I-E) locus of control concept emerging from Rotter's social learning theory is based on an individual's ability to recognize stimulus-

response-reward mechanisms operating in a societal system. An individual who feels controlled by fate or change is said to be externally oriented; he fails to recognize operant reward mechanisms related to his own behavior. In contrasts, an internally oriented person feels he has control over consequences of his behavior; he both recognizes and manipulates the reward mechanisms. Our argument is that it is from this group-internals-that entrepreneurs are to be found.

Highly internally controlled individuals use relevant information within their environment to facilitate their social adaptation. They are actors who recognize and respond to economic bottlenecks in development. This response to recognition of economic problems, is the primary role of entrepreneurs whose solutions lead to greater differentiation and growth. Furthermore, Hersch and Scheibe (1967) have shown that internally controlled individuals are more assertive, achieving, powerful, independent, effective and industrious than are externally controlled individuals. Baron (1968) further argues, internally controlled individuals are the risk-takers of our society. Therefore it is our contention

that placement of an individual on an I-E continuum is a better gauge to his entrepreneurial tendencies than simply measuring his achievement orientation. This approach also leads to more constructive applied programs[2] than McClelland's applied approach, which teaches individuals how to score high on his achievement test. Hagan's theoretical application is even less policy revelant than McClelland's since Hagan's thesis is not operational for policy makers. The requirement is a group's loss of status repect which leads to less authoritarian child rearing practices, thus instilling achievement orientation in the next generation.

The theory presented in this paper combines approaches of McClelland-Hagan and Schumpeter. Appropriateness of Rotter's I-E scale as a measure of entrepreneurial attitudes is tested within the framework of Schumpeter's development paradigm. Potential entrepreneurs can only be effective if the community's social climate allows for a maximum degree of information exchanges and market knowledge. Thus an interaction effect is assumed to exist

---

[2]NewStart, the community development organization from which the data was collected, has operated several programs which assisted individuals in better controlling their social environment. One example was a child-rearing technique course offered in Richibucto Village (Goguen,72)

between communities' entrepreneurial potential (degree of internality) and its social climate (degree of community information flow) in predicting economic growth and differentiation.

A. OPERATIONALIZATION:

1. Entrepreneurial Potential (degree of internality):

Degree of internality is measured using Rotter's I-E aggregate index of twenty-three attitudinal items. The I-E index's possible range is 23 to 46 with results reported in Table 1.[3] By usage of I-E index means for each community, an approximation is made of degrees of internality of the communities and hence a measure of entrepreneurial potential.

2. Social climate (fluidity)

Indicators for social climate, Fluidity, taps the capacity of the system for flow and utilization of relevant system's information among its sub-units. Variations in the fluidity--regidity continuum measures the extent of flow of information and resources in a community (Young and Moreno, 1965, Eberts, 1972)

[3]The mean value of each community is reported. The data was collected by a 20 percent random sample.

TABLE 1

FREQUENCY TABLE *

	Communities	$\bar{X}$ IE	Fluidity A,B,C	Growth D(I), D(C),M
(A)	Acadieville	41*	1	0
(B)	Buctouche	37*	2*	2*
(C)	Cocagne	37*	2*	3*
(I)	St. Ignace	36	1	0
(L)	St. Louis	36	2*	1
(M)	Ste. Marie	35	2*	1
(N)	Ste. Anne	37*	1	1
(P)	St. Paul	36	0	1
(R)	Rexton	38*	3*	3*
(S)	Pointe-Sapin	37*	0	0
(T)	St. Antoine	36	2*	3*
(V)	Richibucto Village	36	0	1
	Mean	36.8	2 or 3	2 or 3

* Criteria used for ranking $\bar{X}_{IE}$ is above the mean; growth and Fluidity index is 2 or above.

Communities are composed of many relatively segregated groupings. These groupings, called class, sub-units or population segments, consist of a combination of segments of occupation, income, education, race, and religion. Eberts (1972) identifies the fluidity dimension as the degree of information flow among these groupings, and further the degree to which each segment actively participates in the functioning of the system.

In the economic sphere high fluidity could best be exemplified by the classical perfect competitive market. A barrier to fluidity in economic systems is the degree of imperfect competition existing in the market.

Indicators selected for fluidity are presented in Table 2 in the form of a factor analysis[4] with factor scores presented in Table 3. An outstanding feature of the factor solution is a separation of structural and aggregate variables into different factors. The first factor clearly represents

---

[4]For a complete discussion of selection and precedures see Self (1975) pp. 101-107.

TABLE 2 Fluidity Factors

Variables	Factors: Structural	Participation in Community Affairs	Political	h^2
Scale of Competition	(.80)	-.12	-.10	.66
Scale of Incorporation	(.75)	-.04	-.33	.67
Village Organizations	(.84)	-.18	-.02	.74
Meeting Facilities	(.71)	-.05	.14	.52
Discuss Public Issues	-.04	(.67)	..10	.46
Work in Elections	-.28	.13	(.57)	.42
Attend Political Meetings	.13	.01	(.84)	.72
Attendance to Social Development Organizations	-.21	(.96)	.00	.95
Percent of Total Variance	39.9	19.4	17.6	76.8
Percent of Common Variance	55.4	23.5	21.1	
Eigenvalue	3.19	1.55	1.41	

TABLE 3

Growth and Fluidity Indicators*

(Com.)	GROWTH			FLUIDITY FACTOR SCORES		
	Multiplier	Diff.(C)	Diff (I)	Structural	Participation	Political
A	109	2	0	-.67	-.17	(1.08)
B	117*	10*	2	(1.45)	(.98)	-.03
C	113*	7*	5*	-.02	(.68)	(.65)
I	109	0	0	-1.18	(.87)	-.48
L	110	7*	1	(1.12)	(.68)	-.89
M	107	1	4*	-.45	(.84)	(1.56)
N	115*	3	2	-.84	(1.22)	-.66
P	107	3	3*	-.56	.22	.44
R	127*	9*	5*	(1.04)	(2.35)	(.67)
S	104	3	2	-.71	-.23	-1.47
T	115*	8*	5*	(.64)	(.53)	-.35
V	107	4	3*	-.75	(.53)	-.84
MEAN	111.7	MEAN 4.75	MEAN 2.7			

* Criteria used for ranking growth indicator is scale scores above the mean; fluidity indicators are factor score above .50.

structural (almost physical) conditions for participation. Factors two and three represent dimensions of people's attitudes which influence their interest and capability of "fluid" participation.

3. Growth:

Growth is measured by Guttman differentiation scales of industrial and commercial complexity and community income multipliers.[5] These are presented in Table 3. The cumulative growth index in Table 1 is derived from these three indicies based on communities' relative position on each measure. Guttman scales for differentiation are reported in the appendix, Table A1 and A2 with their correlation matrix presented in appendix, Table A4.

B. Test of the Theory:

The interactive effects of entrepreneurship (I-E) and fluidity (social climate) on growth is examined with three statistical techniques. The data collected on twelve rural communities of Kent County, New Brunswick, represent communities

[5]For a more thorough discussion of the formation of these indicators see Self (1975) pp. 116-125, and Ting (1973).

with various levels of development in 1972. All of the tests substantiate the growth process hypothesized above.

These relationships were tested by Fisher's exact probability, Kruskal-Wallis one way analysis,and Spearman's rho. Kruskal (H) is one of the strongest tests of its kind with a power efficiency of 95.5% as compared to the F-test (Andrew 1954). These non-parametric techniques measure probability of obtaining such a distribution by chance. Results from these tests are reported in Table 4, Table 5, and Table 6, respectively.

Fisher's exact probability coefficient is p = .18. This is interpreted as a 2% chance of a similar data distribution occurring by chance. Weakness of Fisher's technique is the need to collapse the data into a 2 x 2 table with results of losing some of the information available.

In order to overcome this weakness the data was ranked in Table 5 by growth and organized into four categories of IE-fluidity community structure. Categories three and four containing low fluidity were collapsed to further test the assumption concerning the necessity of high fluidity for community growth. With this matrix, Krusal-Wallis one way analysis was

TABLE 4

Fisher Fxact Probability

Fluidity, I-E

	High on Both	Low on at least one	
Growth High	3 (A)	1 (B)	4
Low	0 (C)	8 (D)	8
	3	9	

$$P = \frac{(A+B)!\ (C+D)!\ (A+C)!\ (B+D)!}{N!\ A!\ B!\ C!\ D!}$$

$$= \frac{4!\ 8!\ 3!\ 9!}{12!\ 3!\ 1!\ 0!\ 8!} = \frac{24}{1320} = .018$$

Probability of occurance by chance is .02.

TABLE 5

Kruskal-Wallis One Way Analysis

Utilization of 4 groups of cases based on Social Structure (I-E and Fluidity) Ranks are based on Communities' growth rate.

COMMUNITIES	High & High Fl Score	High & High I-E Rank	High & Low Fl Score	High & Low I-E Rank	Low & High Fl Score	Low & High I-E Rank	Low & Low Fl Score	Low & Low I-E Rank
Acadieville					(0)	2		
Buctouche	(2)	9						
Cocagne	(3)	11						
St. Ignace							(0)	2
St. Louis			(1)	6				
Ste. Marie			(1)	6				
Ste. Anne					(1)	6		
St. Paul							(1)	6
Rexton	(3)	11						
Pointe-Spain					(0)	2		
St. Antoine			(3)	11				
Richibucto Village							(1)	6

$R_1 = 31$ $R_2 = 23$ $R_{3,4} = 24$

$n_1 = 3$ $n_2 = 3$ $n_{3,4} = 6$

Where N = # of cases

R_j = Column ranking

n_1 = # cases in column

$\sum T = \sum (t^3 - t)$

t = # of ties

$$H = \frac{\frac{12}{N(N+1)} \sum_{j=1}^{k} \frac{R_j^2}{n_j} - 3(N+1)}{1 - \frac{\sum T}{N^3 - N}}$$

$$H = \frac{\frac{12}{156}\left[\frac{31^2}{3} + \frac{23^2}{3} + \frac{24^2}{6}\right] - 3(12+1)}{1 - \left[\frac{(6+6+216)}{1716}\right]}$$

$$H = \frac{6.6}{.87}$$

$H = 7.6$

$H_{.05} = 6.0$

$H_{.02} = 7.8$

TABLE 6

Spearman Rank Conclation

Communities	Growth Scores	Growth Rank	Social Structure F, I-E Score	Social Structure F, I-E Rank	$/d_i/$	d_i^2
Acadieville	0	2	1	5	3	9
Buctouche	2	9	3	11	2	4
Cocagne	3	11	3	11	0	0
St. Ignace	0	2	0	2	0	0
St. Louis	1	6	2	8	2	4
Ste. Marie	1	6	2	8	2	4
Ste. Anne	1	6	1	5	1	1
Ste. Paul	1	6	0	2	4	16
Rexton	3	11	3	11	0	0
Pointe-Spain	0	2	1	5	3	9
St. Antoine	3	11	2	8	3	9
Richibucto Village	1	6	0	2	4	16

$$\text{rho} = \frac{\sum x^2 + \sum y^2 - \sum d_i^2}{2\sqrt{\sum x^2 \sum y^2}}$$

$$= \frac{129 + 135 - 72}{2\sqrt{17415}}$$

$$= \frac{196}{264}$$

$$= .74$$

$$\text{rho}_{.01} = .71$$

$$\sum d_i^2 = 72$$

where $\sum x^2 = \frac{N^3 - N - \sum T_x}{12}$

$$T = \frac{t^3 - t}{12}$$

$$\sum y^2 = 135$$

$$\sum x^2 = 129$$

used to test the null hypothesis that three categories were from the same or identical populations. Ties in ranking were dealt with in the conventional manner with each tied score receiving the mean of ranks involved. Kruskal-Wallis (H) calculated value is 7.6 as compared to the critical value at the .05 level of 6.0. Therefore, the alternative hypothesis is accepted, that there exists a significant difference in community growth for the three categories of social structure.

By both Fisher's and Kruskal's techniques the interactive effects of entrepreneurial potential and fluidity on growth is substantiated. Degree of internality alone is not sufficient to determine growth and development. Schumpeter's additional requirement of high fluidity, is also required if potential entrepreneurs are to be effective.

An additional test of correlation between IE- fluidity structure and growth is measure by Spearman's rank-order correlation (rho). Growth is ranked as before but IE - fluidity structure for communities is ranked along the same order of the four categories in Table 5 using the proven assumption that

presence of high fluidity is more important than presence of high I-E. Table 6 presents the Spearman rho data organization and calculations. The calculated rho is.74 which shows a high significant correlation between IE - fluidity structure and growth.

C. Conclusions

From results presented in Table 4-6 a high positive relationship, .74, is shown to exist between the IE - fluidity structure and growth. Thus, a community's IE - fluidity social structure explains 54% of the variance in that community's growth. In addition, the interaction effect between IE and fluidity was substantiated by both Fisher's probability and Kruskal's (H).

This proposed development model's intrinsic value is found in its adaptability for social planners. Both fluidity and Rotter's locus of control may be policy manipulated, thereby leading to positive programs for community development.

Fluidity is increased in communities by planned programs that facilitate information exchanges. Also encouragement of

community meeting facilitates contacts between individuals and organizations.

Entrepreneurial attitudes in communities may be improved directly through increasing individuals' confidence in controlling and understanding their environment. Rotter's theory was discussed, along with its relation to entrepreneurship above; what we are proposing here is the task of increasing the number of "internal" people in a community. NewStart was successful in increasing internality in three situation that were tested with control and experimental groupings (see especially Maillet in the bibliography). Classes were conducted in child-rearing and simple home economics. Child-rearing courses (Goguen, 1972) produced substantial increases in internality due to parents' abilities to better control their children. The home economics course (Lavigne, 1973a) showed little change in internality. This may have resulted from an early re-test or simply the course did not substantially increase an individual's confidence. The other test of Rotter's I-E concept involved men from the Buctouche Bay Oyster Co-op whose I-E scores were substantially

increased over a three-year period (Lavigne, 1973b). We are confident that other ventures by NewStart would show similar results but unfortunately tests were not conducted for other situations.

Community planning will only be as successful as its theoretical approach. Such theory must both create well-specified, comprehensive and complete models of development. This study attempts to attack this problem and hopefully, therefore contribute to an elaboration for better theory and hence better policy.

APPENDIX

Table A1 Industrial Differentiation

Villages	1	2	3	4	5	6	Scale Scores	Errors	Item Codes
Rexton	1	0	1	1	1	1	5	2	(1) Wholesale
Cocagne	1	0	1	1	1	1	5	2	(2) Other
St. Antoine	0	1	1	1	1	1	5	0	(3) Construction
Ste. Marie	0	1	1	1	1	1	4	2	(4) Livestock
St. Paul	0	0	0	1	1	0	3	0	(5) Processing
R. Village	0	1	0	1	0	1	3	2	(6) Extractive
Buctouche	0	0	0	0	1	1	2	0	
Ste. Anne	0	0	0	0	1	1	2	0	
Port Sapin	0	0	0	0	1	1	2	0	
St. Louis	0	0	0	0	0	1	1	0	
Acadieville	0	0	0	0	0	0	0	0	
St. Ignace	0	0	0	0	0	0	0	0	

Coefficient of Reproducibility .89
Minimum Marginal Reproducibility .69
Percent Improvement .19
Menzel Coefficient of Scalability .64
Green's Test: Rep I = .86 Rep A = .93 Z-value = 2.3 $t_{.05}$ = 2.2

Table A2 Commercial Differentiation

Villages	Items* 11	10	9	8	7	6	5	4	3	2	1	Scale Score	Errors
Buctouche	1	1	1	0	1	1	1	1	1	1	1	10	2
Rexton	0	1	1	1	1	1	1	1	0	1	1	9	2
St. Antoine	0	0	1	1	0	1	1	1	1	1	1	8	2
Cocagne	0	0	0	1	1	0	1	1	1	1	1	7	2
St. Louis	0	0	0	0	1	1	1	1	1	1	1	7	0
R. Village	0	0	0	0	0	1	0	0	1	1	1	4	2
Ste. Anne	0	0	0	0	0	0	1	1	0	0	1	3	4
St. Paul	0	0	0	0	1	0	0	0	1	1	0	3	2
Port Sapin	0	0	0	0	0	0	0	0	1	1	1	3	0
Acadieville	0	0	0	0	0	0	0	0	0	1	1	2	0
Ste. Marie	0	0	0	0	0	0	0	0	0	0	1	1	0
St. Ignace	0	0	0	0	0	0	0	0	0	0	0	0	0

Coefficient of Reproducibility .88
Minimum Marginal Reproducibility .69
Percent Improvement .19
Menzel Coefficient of Scalability .61
Green's Statistics: Rep I = .83 Rep A = .93 Z-value = 4.8 $t_{.05}$ = 2.2

*See Table 6 for coding.

TABLE A3. Commercial Differentiation Items

Items		Frequency	Functional Equivalent Items
1	Recreation Services	.83	Beauty Salons and Barber Shops
2	Take Outs	.75	
3	Large General Stores	.58	
4	Motels-Hotels	.50	Auto Body and Salvage, Carpenter Shops
5	Fire Halls	.42	Mechanical Repairs
6	Contractors Other Than Housing	.50	
7	T.V. and Radio Repairs	.42	Clothing Stores, Other Specialized Stores
8	Housing Contractors	.25	Restaurants, Fuel Oil Distributors
9	Furniture Store	.25	Hardware Store, Insurance Company, Liquor Stores
10	Doctor's Office	.16	Laundromat, Welding Shop, Bakery
11	Funeral Home	.08	Lawyer's Office, Tavern, Dentist, CN Office

TABLE A4
Spearman's Correlation of Differentiation Measures

(1) Industrial Scalogram	1.00	.57	.33	.55
(2) Commerical Scalogram	.57	1.00	.64	.96
(3) Multiplier	.33	.64	1.00	.76
(4) Commerical Summated Index (31 items)	.55	.96	.76	1.00

BIBLIOGRAPHY

Baron, R. A.
1968 "Authoritarianism, Locus of Control and Risk Taking." Journal of Psychology 68:141-143.

Bauer, Peter and Basil Yamey
1957 The Economics of Under-developed Countries. Chicago: University of Chicago Press.

Curtis, Richard and Elton Jackson
1962 "Multiple Indicators in Survey Research." American Journal of Sociology 68:195-204

Eberts, Paul R.
1971a "Theoretical Perspective on Community Change and Development." Paper presented to the Association of Southern Agricultural Workers, Jacksonville, Florida.

1971b "Toward a General Model of Macro-System Social Change." Paper presented at the Annual Meetings of the Rural Sociological Society, Washington, D.C.

1971c A Theoretical Perspective Toward an Action-Oriented Model of Community Change and Development. Report #R-71-52. Richibucto, N.B.: New Brunswick NewStart Inc.

1972 "Consequences of Changing Social Organization in Counties of the Northeast." Proceedings of the Workshop on Current Rural Development and Regional Research in the Northeast, Stratton Mountain, Vermont. Ithaca, N.Y.: Cornell University.

Ebert, Paul R. and Frank W. Young
1971 "Sociological Variables of Development: Their Range and Characteristics." Sociological Perspectives of Domestic Development, edited by George M. Beal et al. Ames: Iowa State University Press.

Gardner, Elmer
1968 "Concepts of Mental Disorders." The Definition of Measurement of Mental Health, edited by S. B. Sells. Washington, D.C.: Department of Health, Education, and Welfare.

Goguen, Lucille
1972 Internal-External Locus of Control. Report #R-72-83. Richibucto, N.B.: New Brunswick NewStart Inc.

Goodenough, W. H.
1944 "A Technique for Scale Analysis." Educational and Psychological Measurements 4:179-190

Hagen, Everett E.
1962 On the Theory of Social Change: How Economic Growth Begins. Homewood, Ill.: Dorsey Press.

Harman, Harry H.
1967 Modern Factor Analysis. Chicago: University of Chicago Press.

Isard, Walter
1956 Location and Space-Economy. Cambridge: M.I.T. Press.

1960 Methods of Regional Analysis. Regional Science Study Series #4. Cambridge: M.I.T. Press.

Kilby, Peter, ed.
1971 Entrepreneurship and Economic Development. New York: The Fre Press.

Lavigne, Marc
1973a Effects of a Course of Home Economics on the I-E Scale. Report #R-73-127. Richibucto, N.B.: New Brunswick NewStart Inc.

1973b Evaluation of the Village Bay Oyster Company in Terms of Rotten's I-E Locus of Control. Report #R-73-126. Richibucto, N.B.: New Brunswick NewStart Inc.

Maillet, Leandre
1971 Induced Changes in the Internal-External Locus of Control. Report #R-71-58. Richibucto, N.B. New Brunswick NewStart Inc.

1972a Preliminary Investigations on a Translated Scale of Locus of Control. Report #R-72-82. Richibucto N.B.: New Brunswick NewStart Inc.

Maillet, Leandre
1972b The Internal-External Construct in Relation to Eberts' Model of Social Change. Report #R-72-85. Richibucto, N.B.: New Brunswick NewStart Inc.

1973 Toward the Refinement of a Measure of Internal-External Locus of Control. Report #R-73-118. Richibucto, N.B.: New Brunswick NewStart Inc.

McClelland, David C.
1961 The Achieving Society. Princeton, N.J.: D. Van Nostrand Co., Inc.

1962 "Review of E. E. Hagen, On the Theory of Social Change." Economic Development and Cultural Change 12:320-324

Nurkse, Ragnar
1953 Problems of Capital Formation in Underdeveloped Countries. Oxford: Basil Blackwell and Mott.

Rotter, J. B.
1954 Social Learning and Clinical Psychology. Englewood Cliffs, N. J.: Prentice-Hall.

1966 "Generalized Excetancies for Internal Versus External Control of Reinforcements." Psychological Monographs.

Schumpeter, Joseph A.
1934 The Theory of Economic Development. Cambridge, Mass.: Harvard University Press.

1954 History of Economic Analysis. New York: Oxford University Press.

1961 The Theory of Economic Development. Cambridge, Mass.: Harvard University Press.

Self, George D.
1970 "A Sociological Study of Entrepreneurship." M.A. Seminar Thesis. Boston University, Department of Economics.

Self, George D.
1975 A Policy Relevant Macro-Structural Theory of Development A Social Indicator Study of Twelve Rural Communities in Kent County, New Burnswick, 1969-1973. Report Moncton, N.B. Box 911: New Brunswick NewStart, Inc.

Sismondo, Sergio
1973 An Experimental Action-Research Program in Community and Regional Development and Monitored Social Change. Richibucto, N.B.: New Brunswick NewStart, Inc.

Ting, Ja Hua
1973 Multipliers, Linkages and Differentiation: A Case Study of Kent County, New Brunswick. Report #R-73-124. Richibucto N.B.: New Brunswick NewStart, Inc.

Young, Frank W.
1970 "Reactive Subsystems." American Sociological Review. 35:295-305

Young, Ruth C. and Jose A. Moreno
1965 "Economic Development and Social Rigidity: A Comparative Study of the Forty-Eight States." Economic Development and Cultural Change 13:439-452.